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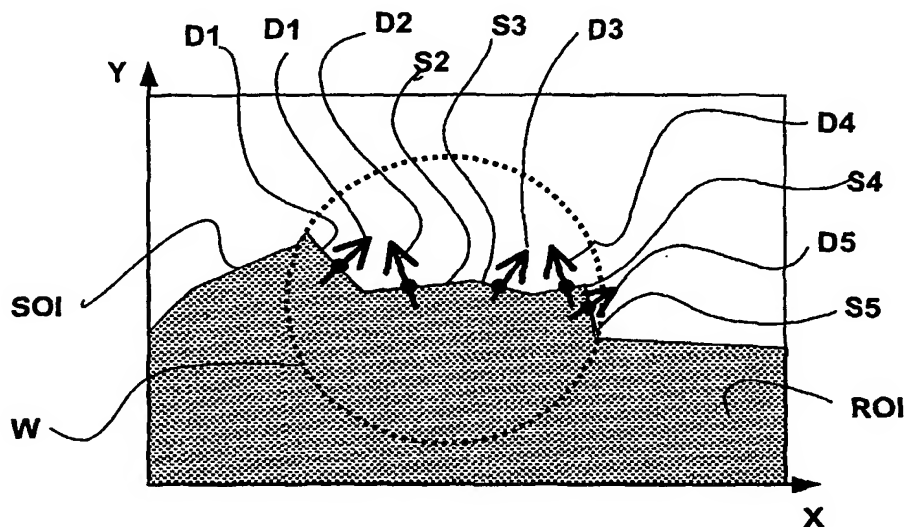
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(54) Title: CHARACTERIZING, CODING AND COMPARING SURFACES, CONTOURS OR BOUNDARIES IN MEDICAL IMAGING



(57) Abstract: The invention relates to a medical image processing system comprising means for identifying a boundary of the object, and reference points of said object boundary and for decomposing said object boundary into boundary unit elements, centred at the reference points, means for coding each reference point including spatial information and intensity information using dipoles or magnetic moments; computing transform coefficients from said coding data. A finite number of said coefficients is used for representing said object boundary by a polynomial transform function (e.g. Hermite polynomials). This system has means for comparing, matching, correlating, smoothing corresponding boundary portions of the object in different images, only by performing operations on the transform coefficients. These operations yield rotation, translation, scale change transform coefficients.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06T G06F G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 6 078 680 A (KATSURAGAWA SHIGEHICO ET AL) 20 June 2000 (2000-06-20) column 3, line 43 - column 4, line 33 column 10, line 13 - line 49 column 13, line 14 - column 14, line 39 column 14, line 50 - column 15, line 5 column 15, line 26 - line 37 column 16, line 30 - line 67 figures 1,4 --- -/--	1,2,6-14 3-5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>KUBOTA T. AND HUNTSBERGER T.: "Edge Dipole and Edge Field for Boundary Detection"</p> <p>PART OF THE SPIE CONFERENCE ON HYBRID IMAGE AND SIGNAL PROCESSING VI, vol. 3389, 1998, pages 179-189, XP002272580</p> <p>Orlando, Florida, US</p> <p>abstract</p> <p>-----</p>	3

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